

# Inspector General

United States  
Department of Defense



U.S. Air Force Academy Could Have Significantly  
Improved Planning Funding, and Initial Execution of  
the American Recovery and Reinvestment Act  
Solar Array Project

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## Acronyms and Abbreviations

CSU	Colorado Springs Utilities
FAR	Federal Acquisition Regulation
FBO	Federal Business Opportunities
FPDS	Federal Procurement Data System
FSRM	Facilities Sustainment, Restoration, and Modernization
GAO	Government Accountability Office
IGCE	Independent Government Cost Estimate
MW	Megawatt
OMB	Office of Management and Budget
QMAD	Quantitative Methods and Analysis Division
USAFA	U.S. Air Force Academy



INSPECTOR GENERAL  
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June 16, 2011

MEMORANDUM FOR UNDER SECRETARY OF DEFENSE (COMPTROLLER)/  
CHIEF FINANCIAL OFFICER  
ASSISTANT SECRETARY OF THE AIR FORCE  
(FINANCIAL MANAGEMENT AND COMPTROLLER)

SUBJECT: U.S. Air Force Academy Could Have Significantly Improved Planning,  
Funding, and Initial Execution of the American Recovery and Reinvestment  
Act Solar Array Project (Report No. D-2011-071)

We are providing this report for review and comment. The U.S. Air Force Academy (USAFA) properly justified the solar array project; however, the USAFA did not have proper controls to ensure that the project was planned, funded, and initially executed in accordance with Federal Acquisition Regulation requirements.

DoD Directive 7650.3 requires that all recommendations be resolved promptly. The Deputy Chief of Staff for Manpower and Personnel and the Deputy Chief of Staff for Logistics, Installations and Mission Support, Headquarters U.S. Air Force, did not comment on a draft of this report. We request comments from the Deputy Chief of Staff for Manpower and Personnel, Headquarters U.S. Air Force, on Recommendation 1 and comments from the Deputy Chief of Staff for Logistics, Installations and Mission Support, Headquarters U.S. Air Force, on Recommendation 2 by July 18, 2011.

If possible, please send a .pdf file containing your comments to [audacm@dodig.mil](mailto:audacm@dodig.mil). Copies of the management comments must contain the actual signature of the authorizing official. We are unable to accept the /Signed/ symbol in place of the actual signature. If you arrange to send classified comments electronically, you must send them over the SECRET Internet Protocol Router Network (SIPRNET).

We appreciate the courtesies extended to the staff. Please direct questions to me at (703) 604-9071 (DSN 664-9071).

A handwritten signature in black ink, appearing to read "Bruce A. Burton", is located above the typed name.

Bruce A. Burton  
Deputy Assistant Inspector General  
Acquisition and Contract Management







# Results in Brief: U.S. Air Force Academy Could Have Significantly Improved Planning, Funding, and Initial Execution of the American Recovery and Reinvestment Act Solar Array Project

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## What We Did

Our audit objective was to review the planning, funding, and initial execution (contracting) of a project to provide solar power to the U.S. Air Force Academy (USAFA). We determined whether the USAFA complied with American Recovery and Reinvestment Act (Recovery Act) requirements, Office of Management and Budget guidance, the Federal Acquisition Regulation (FAR), and DoD implementing guidance.

## What We Found

The USAFA properly justified the solar array project; however, it could have significantly improved planning, funding, and initial execution of the project in accordance with FAR requirements. This occurred because

- the USAFA incorrectly categorized all project costs as a utility company connection charge and structured the project to require a single advance payment to Colorado Springs Utilities (CSU) and
- the USAFA incorrectly exempted the solar array project from FAR Subpart 32.4, "Advance Payments for Non-Commercial Items."

As a result, the USAFA paid the \$18.3 million program funds in advance to CSU instead of the \$1.2 million for connection of the solar array to the electrical grid, which was an allowable exemption of the FAR. In addition, as of

December 20, 2010, the project was over 7 months behind schedule, and the USAFA had no financial leverage to ensure its timely completion.

## What We Recommend

We recommend that the Deputy Chief of Staff for Manpower and Personnel, Headquarters U.S. Air Force, perform an administrative review to determine accountability for USAFA categorization of all Recovery Act solar array project costs as a utility company connection charge and take appropriate action if warranted. We also recommend that the Deputy Chief of Staff for Logistics, Installations and Mission Support, Headquarters U.S. Air Force, develop policies and procedures for planning and funding energy projects with public utility companies, which properly categorize the contracted work and prevent advance payment of all project funds except as specifically authorized by law or regulation.

## Management Comments Not Received

The Deputy Chief of Staff for Manpower and Personnel and the Deputy Chief of Staff for Logistics, Installations and Mission Support, Headquarters U.S. Air Force, did not comment on the draft of this report issued on March 28, 2011. We request that the Deputy Chief of Staff for Manpower and Personnel and the Deputy Chief of Staff for Logistics, Installations and Mission Support, Headquarters U.S. Air Force, provide comments by July 18, 2011. Please see the recommendations table on the back of this page.

## Recommendations Table

Management	Recommendations Requiring Comment	No Additional Comments Required
Deputy Chief of Staff for Manpower and Personnel, Headquarters U.S. Air Force	1	
Deputy Chief of Staff for Logistics, Installations and Mission Support, Headquarters U.S. Air Force	2	

**Please provide comments by July 18, 2011.**

# Table of Contents

<b>Introduction</b>	1
Objective	1
Recovery Act Background	1
The Energy Policy Act	3
The USAFA Mission	4
USAFA Internal Controls Were Inadequate	5
<b>Finding. USAFA Could Have Significantly Improved Planning, Funding, and Initial Execution of the Solar Array Project</b>	6
Project Planning	6
USAFA Properly Justified the Project	6
USAFA Incorrectly Categorized the Project as a Connection	6
Project Funding	7
Analysis of Project Costs	7
Improper Advance Project Funding	8
Initial Execution	8
USAFA Improperly Awarded the Delivery Order	8
USAFA Properly Posted Contracting Notifications and Included Required Contract Clauses	9
CSU Incurred a Delay in the Project	9
Conclusion	10
Recommendations	11
Management Comments Required	11
<b>Appendices</b>	
A. Scope and Methodology	12
Scope	12
Methodology	12
Use of Computer-Processed Data	13
Prior Audit Coverage	13
B. Recovery Act Criteria and Guidance	14





# Introduction

## Objective

The primary objective of the audit was to determine whether DoD and its Components were planning and implementing the American Recovery and Reinvestment Act of 2009 (Recovery Act) by meeting the requirements in the Recovery Act, Office of Management and Budget (OMB) Memorandum M-09-10, “Initial Implementing Guidance for the American Recovery and Reinvestment Act of 2009,” February 18, 2009, and subsequent related guidance. For this audit, we reviewed the planning, funding, and initial execution (contracting) of a Recovery Act project to provide solar power to the USAFA. We determined whether the USAFA complied with Recovery Act requirements, OMB guidance, the Federal Acquisition Regulation (FAR), and DoD implementing guidance. See Appendix A for a discussion of our scope and methodology.

## Recovery Act Background

The President signed the Recovery Act into law on February 17, 2009. It is an unprecedented effort to jump-start the economy and create or save jobs.

The purposes of this Act include the following:

- (1) To preserve and create jobs and promote economic recovery.
- (2) To assist those most impacted by the recession.
- (3) To provide investments needed to increase economic efficiency by spurring technological advances in science and health.
- (4) To invest in transportation, environmental protection, and other infrastructure that will provide long-term economic benefits.
- (5) To stabilize State and local government budgets, in order to minimize and avoid reductions in essential services and counterproductive state and local tax increases.

... the heads of Federal departments and agencies shall manage and expend the funds made available in this Act so as to achieve the purposes specified . . . including commencing expenditures and activities as quickly as possible consistent with prudent management.

## Recovery Act Requirements

The Recovery Act and implementing OMB guidance require projects to be monitored and reviewed. We grouped these requirements in the following four phases: (1) planning, (2) funding, (3) initial execution, and (4) tracking and reporting. The Recovery Act requires that projects be properly planned to ensure the appropriate use of funds. Review of the funding phase is to ensure the funds were distributed in a prompt, fair, and reasonable manner. Review of the initial execution phase is to ensure that contracts awarded with Recovery Act funds were transparent, competed, and contained specific FAR clauses; that Recovery Act funds were used for authorized purposes; and that instances of fraud, waste, and abuse were mitigated. Review of the initial execution phase also ensures that program goals were achieved, including specific program

outcomes and improved results on broader economic indicators; that projects funded avoided unnecessary delays and cost overruns; and that contractors or recipients of funds reported results. Review of the tracking and reporting phase ensures that the recipients' use of funds was transparent to the public and that benefits of the funds were clearly, accurately, and timely reported.

## ***Recovery Act Contracting Requirements***

The Recovery Act establishes transparency and accountability requirements. Federal Acquisition Circular 2005-32, March 31, 2009, provides policies and procedures for the Government-wide implementation of the Recovery Act and guidance on special contract provisions. Federal Acquisition Circular 2005-32 amended the FAR and provided interim rules that made FAR solicitation provisions and contract clauses immediately available for inclusion in contracts for Recovery Act work.

The specific FAR Recovery Act requirements are for:

- buying American construction material,
- protecting contractor whistleblowers,
- publicizing contract actions,
- reporting, and
- giving the Government Accountability Office and agency Inspectors General access to contracting records.

Federal Government organizations meet requirements for Recovery Act contract actions by posting information on the Federal Business Opportunities (FBO) and Federal Procurement Data System (FPDS) Web sites. FAR Subpart 5.7, "Publicizing Requirements Under the American Recovery and Reinvestment Act of 2009," directs contracting officers to use the Government-wide FBO Web site (<http://www.fedbizopps.gov>) to:

- identify the action as funded by the Recovery Act,
- post pre-award notices for orders exceeding \$25,000,
- describe supplies in a clear narrative to the general public, and
- provide the rationale for awarding any contracting actions that were not both fixed-price and competitive.

FBO is the Federal Government's central source of Federal procurement opportunities. FBO is a Web-based portal that allows agency officials to post Federal procurement opportunities and contractors to search and review those opportunities. Agencies also post contract award notices on FBO. In addition, to provide transparency, FBO has a separate section identifying Recovery Act opportunities and awards.

FPDS is the Federal Government's central source of procurement information. Contracting officers enter information, to include the Treasury Account Symbol, in the FPDS for all Recovery Act contract actions. The Treasury Account Symbol enables

FPDS to provide transparency by generating and posting a report containing all Recovery Act contract actions.

## **OMB Recovery Act Guidance**

Criteria for planning and implementing the Recovery Act continue to change as OMB issues additional guidance and DoD and the Components issue their implementation guidance. OMB has issued 11 memoranda and one bulletin to address the implementation of the Recovery Act. See Appendix B for Recovery Act criteria and guidance.

## **DoD Recovery Act Program Plans**

Under the Recovery Act, Congress appropriated approximately \$12 billion to DoD for the following programs: Energy Conservation Investment; Facilities Sustainment, Restoration, and Modernization (FSRM); Homeowners Assistance; Military Construction; Near Term Energy-Efficient Technologies; and U.S. Army Corps of Engineers Civil Works.

**Table 1. DoD Agency-Wide and Program-Specific Recovery Act Programs**

<b>Program</b>	<b>Amount (in millions)</b>
Energy Conservation Investment	\$120
Facilities Sustainment, Restoration, and Modernization	4,260*
Homeowners Assistance	555
Military Construction	2,185
Near Term Energy-Efficient Technologies	300
U.S. Army Corps of Engineers Civil Works	4,600
<b>Total</b>	<b>\$12,020*</b>

\*On August 10, 2010, Public Law 111-226, Title III, "Rescissions," rescinded \$260.5 million of funds from DoD Operations and Maintenance Accounts supporting the Recovery Act. This reduced the DoD Recovery Act FSRM amounts to approximately \$4 billion and total DoD Agency-wide and Program-Specific Recovery Act program funding to approximately \$11.76 billion.

The Recovery Act divides the approximately \$12 billion among 32 DoD and U.S. Army Corps of Engineers line items of appropriations. This report covers one FSRM project, valued at \$18.3 million, to provide solar power to the USAFA.

## **The Energy Policy Act**

Congress passed Energy Policy Act of 2005, Public Law No. 109-58, section 203, 119 Stat. 594 (2005). One of its goals is to increase the Federal Government's total renewable energy use, based on the following targets:

- not less than 3 percent in 2007 through 2009,
- not less than 5 percent in 2010 through 2012, and
- not less than 7.5 percent in 2013 and each year thereafter.

Solar power is one of the renewable energy sources promoted in the Energy Policy Act. In addition, Exec. Order No. 13423, 72 *Fed. Reg.* 17 (2007) requires that Federal agencies ensure that at least half of the statutorily required renewable energy consumed in a fiscal year comes from new renewable sources, and to the extent feasible, the agency implements renewable energy generation projects on agency property for agency use.

## The USAFA Mission

The USAFA is both a military organization and a university. Much of the Academy is set up like most other Air Force bases, particularly the 10th Air Base Wing, but the superintendent, commandant, dean of faculty, and cadet wing are set up in a manner resembling a civilian university.

The 10th Air Base Wing comprises more than 3,000 military, civilian, and contract personnel, who conduct all base-level support activities, including law enforcement and force protection, civil engineering, communications, logistics, military and civilian personnel, financial management, services, and clinics for a military community of about 25,000 people.

The 2009 USAFA Energy Strategic Plan objectives were to

- Become a “Net-Zero” electricity installation by the end of calendar year 2015,
- Meet all federal energy reduction mandates,
- Play a leading role in renewable energy research, and
- Embody each cadet with an understanding that energy must be a consideration in all we do.

Figure 1 shows the current state of the ongoing construction of the solar array at the USAFA as of February 16, 2011.

**Figure 1. USAFA Solar Array Project**



## **USAFA Internal Controls Were Inadequate**

DoD Instruction 5010.40, “Managers’ Internal Control Program (MICP) Procedures,” July 29, 2010, requires DoD organizations to implement a comprehensive system of internal controls that provides reasonable assurance that programs are operating as intended and to evaluate the effectiveness of the controls. We determined that USAFA internal controls over planning, funding, and initial execution of the solar array project were inadequate as they applied to the audit objectives. Specifically, the USAFA incorrectly categorized all project costs as a utility company connection charge, which caused the USAFA to make an improper advance payment. We will provide a copy of the report to the senior officials responsible for internal controls in the Air Force.



## **Finding. USAFA Could Have Significantly Improved Planning, Funding, and Initial Execution of the Solar Array Project**

The USAFA properly justified the solar array project; however, it could have significantly improved planning, funding, and initial execution of the project in accordance with FAR requirements. This occurred because the USAFA incorrectly categorized all project costs as a utility company “connection charge” and structured the project to require an advance payment to the utility company at the time of the contract award. As a result, the USAFA paid all \$18.3 million of Recovery Act funds when awarding the contract. As of December 20, 2010, the project was over 7 months behind schedule, and the USAFA had no financial leverage to ensure its timely completion.

### **Project Planning**

#### ***USAFA Properly Justified the Project***

The USAFA provided project information on a DD 1391, “Military Construction Project Data.” DoD Regulation 7000.14-R, “DoD Financial Management Regulation,” requires DoD Components to use a DD 1391 to support the request for authorization of both new construction and urgent unforeseen projects using emergency or contingency authorization. We reviewed the April 10, 2009, DD 1391 and supporting cost documentation for the solar array project. The DD 1391 adequately explained the project justification, requirements, current state, and impact if the project was not implemented. We reviewed the Energy Policy Act of 2005 and Exec. Order No. 13423 and concluded that the USAFA needed to increase its use of renewable energy to meet its energy reduction goals required by public law. We concluded that the Recovery Act project was based on a valid USAFA renewable energy requirement.

On April 20, 2009, the USAFA completed a business case analysis to evaluate and compare five alternatives to meet USAFA renewable energy goals and mandates and concluded that creating a strategic partnership with Colorado Springs Utility (CSU)—in which the utility would construct, connect, own, operate, and maintain a 3-megawatt (MW) solar array—was the best way to implement the requirement. CSU provided electric, gas, water, wastewater, and energy management services to the USAFA under a 2006 General Services Administration Area-Wide Utility contract.

#### ***USAFA Incorrectly Categorized the Project as a Connection***

The USAFA took a broad view of the term “connection” and determined that the entire solar array project, rather than just the connection of the solar array to the power grid, could be categorized as a connection. Accordingly, the USAFA contracting officer and civil engineering personnel considered the project costs to be exempt from the provisions of FAR subpart 32.4. FAR 32.404(a)(5), “Exclusions,” states that FAR subpart 32.4 provisions do not apply to an extension or connection of public utilities for Government buildings or installations authorized by law.

USAFA civil engineering personnel identified the requirements for the solar array project in a June 30, 2009, statement of objective. The statement of objective requested that CSU perform an overall project design to determine the size of a solar array that could be constructed within an \$18.3 million budget parameter. The statement of objective also said that the \$18.3 million connection charge would be paid when the delivery order was signed. The USAFA provided the statement of objective to CSU in lieu of a request for proposal.

## Project Funding

### *Analysis of Project Costs*

The March 20, 2009, “DoD Expenditure Plan for the American Recovery and Reinvestment Act of 2009” included the USAFA solar array project, valued at \$18.3 million and funded through appropriation code 57-3404, Air Force Recovery Act, Operation and Maintenance. On March 24, 2009, the Office of the Assistant Secretary of the Air Force (Financial Management and Comptroller) issued a Budget Authorization/Allocation document to the USAFA for \$18.3 million.

Both the independent Government cost estimate (IGCE), April 20, 2009, and the CSU proposal, July 29, 2009, placed the estimated project costs into seven categories. These categories were later included in the contract. Table 2 shows the seven categories and their estimated costs.

**Table 2. Solar Array Project Costs**

<b>Category</b>	<b>IGCE</b>	<b>CSU Proposal</b>
Environmental assessment	\$77,000	\$100,000
Engineering design	504,000	550,000
Purchase and installation of solar panels	16,800,000	16,108,500
Connection of solar array to grid	600,000	1,200,000
Due diligence study	100,000	250,000
Project management	220,000	
General and administrative expenses		91,500
<b>Total connection charge</b>	<b>\$18,301,000</b>	<b>\$18,300,000</b>

The seven categories included one for the connection of the solar array to the grid, and the overall project estimated and proposed costs were titled “total connection charge.” The IGCE and the CSU proposal estimates were based on allocation of the \$18.3 million identified for the project in both the DoD expenditure plan and the statement of objective. Both the IGCE and the CSU proposal lacked detailed analysis of the project costs or sufficient supporting documentation.

## ***Improper Advance Project Funding***

USAFA Financial Management personnel should not have paid the full contract amount of \$18.3 million in advance. FAR subpart 32.4 states that “advance payment is the least preferred method of contract financing” and should be used “sparingly.” If advance payments are used, the agency head must show in writing how the advance payment is in the public interest. The agency must also ensure that the advance payment will not exceed the contractor’s interim cash needs, based on an analysis of the cash flow required for contract performance. In addition, FAR 32.407, “Interest,” states that the contracting officer shall charge interest on the daily unliquidated balance of all advance payments.

The determination by the USAFA contracting officer and civil engineering personnel that the project was a connection charge resulted in the USAFA exempting the project from the provisions of FAR subpart 32.4.

We disagree with the interpretation that the entire amount was a connection charge. The September 2008 “United States Air Force Utilities Privatization Policy and Guidance Playbook” defines a connection charge as paying the utility owner to install the service line between the building point of demarcation and the utility main. Reasonable interpretation of the term “connection” suggests that only the costs for work necessary to connect the solar array to the power grid, and not the costs for installation of the solar array, should be included as a valid connection charge.

The total cost of the project was not a connection charge, as defined under FAR 32.404(a)(5), and the advance payment of the \$18.3 million of project cost should not have been made to CSU. Instead, only the \$1.2 million for “connection of the solar array to the grid” should have been excluded from the provisions of FAR subpart 32.4.

*As of September 30, 2010, the unliquidated balance of the \$15.3 million advance payment would have earned the Government more than \$676,000 in interest.*

Therefore, \$17.1 million of the \$18.3 million was not exempt from FAR subpart 32.4. The USAFA contracting officer did not make advance payments based on an analysis of the cash flow required for contract performance or charge the contractor interest on the daily unliquidated balance of the advance payment as required by FAR 32.407. As of September 30, 2010, only \$1.8 million of the

\$17.1 million had been spent by CSU. Therefore, as of September 30, 2010, the unliquidated balance of the \$15.3 million advance payment would have earned the Government more than \$676,000 in interest.

## **Initial Execution**

### ***USAFA Improperly Awarded the Delivery Order***

The USAFA provided the June 30, 2009, statement of objective to CSU in lieu of a request for proposal. On July 14, 2009, before submittal of the CSU proposal and the

delivery order award, the Colorado Springs City Council approved a CSU tariff<sup>1</sup> that included an \$18.3 million payment for on-site, direct-service solar contract service for the USAFA, for the billing period of July 15, 2009, to September 30, 2009. The CSU proposal, dated July 29, 2009, included the statement that the USAFA would pay a connection charge of \$18.3 million to CSU upon signature of the amended contract.

On August 6, 2009, the USAFA contracting officer awarded delivery order FA7000-09-F-0023 for General Services Administration Area-Wide Utilities contract GS-00P-06-BSD-0399. The delivery order award was firm-fixed-priced at \$18.3 million to CSU. The delivery order was signed in accordance with the statement of objective and the CSU proposal and required an advance payment for a connection charge of \$18.3 million.

USAFA civil engineering personnel stated that the advance payment of \$18.3 million was required by the CSU tariff. As shown in the previous paragraph, the tariff (law) that required the advance payment, and therefore the exclusion from complying with FAR subpart 32.4, had not yet been issued or approved when the USAFA provided the June 30, 2009, statement of objective to CSU. In fact, the tariff payment schedule was based on the determination in the June 30, 2009, statement of objective that the USAFA would pay a connection charge of \$18.3 million to CSU upon signature of the amended contract.

### ***USAFA Properly Posted Contracting Notifications and Included Required Contract Clauses***

USAFA contracting personnel met basic Recovery Act contracting goals by properly posting presolicitation and award notices for the solar array project on the FBO Web site. The language in the presolicitation and award notice met the intent of the Recovery Act project requirements.

USAFA contracting personnel properly posted the August 6, 2009, award of delivery order FA7000-09-F-0023 in the FPDS. The FPDS showed the delivery order was a firm-fixed-priced award to CSU for \$18.3 million with an estimated completion date of November 18, 2010. It also included the treasury account symbol 57-3404, Air Force Recovery Act, Operation and Maintenance, which enabled FPDS to provide transparency by generating and posting a report containing all Recovery Act contract actions. The USAFA contracting officer properly included the required FAR clauses for the delivery order of the solar array project.

### ***CSU Incurred a Delay in the Project***

The solar array project did not proceed within the planned project schedule. Delivery order FA7000-09-F-0023 was awarded on August 6, 2009. Delivery order FA7000-09-F-0023 required CSU to complete the project by the CSU-proposed date of November 18, 2010. On April 23, 2010, the contracting officer extended the period of performance on the delivery order 133 days, to March 31, 2011. On September 22, 2010, CSU awarded a

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<sup>1</sup> The Colorado Springs city tariff implements public utility schedules of rates of charges to CSU customers.

subcontract to SunPower Corporation for \$16 million, to build a 5.2-MW solar array at the USAFA. In accordance with the statement of objective and the CSU proposal, the size of the solar array was increased from 3 MW to 5.2 MW—the size that could be constructed within the \$18.3 million budget parameter. CSU incurred a 6-month delay (until September 2010) in awarding a construction subcontract for the project. On December 20, 2010, the contracting officer again extended the period of performance 91 days to June 30, 2011. Altogether, the contract period of performance increased 224 days, or approximately 50 percent. Table 3 shows the planned and actual project milestone dates.

**Table 3. Solar Array Project Milestones**

<b>Project Milestone</b>	<b>Planned</b>	<b>Actual</b>
Prime contract award	July 31, 2009	Aug. 6, 2009
Environmental assessment	March 12, 2010	April 21, 2010
Award solar array construction subcontract	March 26, 2010	Sept. 22, 2010
Solar array project completion	Nov. 18, 2010	June 30, 2011 (present estimate)

The prime contract with CSU included planned milestones but no percentage-of-completion requirements because all funds were paid at contract signing. In addition, the prime contract did not include any liquidated damages for contractor noncompliance with the planned milestones or interest charges. As a result of the up-front outlay of all \$18.3 million, the Government retained no payment leverage in the management of the solar array project execution, which was over 7 months behind schedule as of December 20, 2010.

## Conclusion

The USAFA Solar Array project was a justified requirement necessary to meet renewable energy goals required by public law. However, the USAFA decision to categorize the entire solar array project as a connection charge led to planning, funding, and initial execution problems.

The USAFA incorrectly categorized the entire solar array funded cost as a connection charge. The requirement for the full \$18.3 million in advance payment resulted from a decision by the USAFA contracting officer and civil engineering personnel, not from the subsequent tariff. Only the \$1.2 million for connection of the solar array to the grid should have been excluded from the provisions of FAR subpart 32.4. The USAFA statement of objective, and therefore the delivery order, should have included a multiple payment schedule rather than a onetime advance payment of \$18.3 million. The USAFA contracting officer would then have ensured that Government interests were protected.

## **Recommendations**

1. We recommend that the Deputy Chief of Staff for Manpower and Personnel, Headquarters U.S. Air Force, perform an administrative review to determine accountability for U.S. Air Force Academy categorization of all Recovery Act solar array project costs as a utility company connection charge and take appropriate action if warranted.
2. We recommend that the Deputy Chief of Staff for Logistics, Installations and Mission Support, Headquarters U.S. Air Force, develop policies and procedures for planning and funding energy projects with public utility companies, which properly categorize the contracted work and prevent unauthorized advance payment of all project funds.

## **Management Comments Required**

The Air Force did not comment on a draft of this report. We request that the Air Force provide comments on the final report.



# **Appendix A. Scope and Methodology**

We conducted this audit from September 2009 through March 2011 in accordance with generally accepted government standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our conclusions based on our audit objectives.

## **Scope**

We selected one FSRM project with a total estimated cost of \$18.3 million. This project consisted of the design, construction, connection, and maintenance of a solar array at the USAFA. Our review included interviewing staff at Headquarters U.S. Air Force, the USAFA, and the Air Force Civil Engineering Support Agency. We also reviewed requirements, contracting, and financial documentation from August 2005 through December 2010.

## **Methodology**

To accomplish our objective, we audited the planning, funding, and initial execution of the USAFA Recovery Act solar array project to determine whether Air Force efforts complied with Recovery Act requirements, OMB guidance, the FAR, and DoD implementing guidance. Specifically, we determined whether:

- the selected projects were adequately planned to ensure the appropriate use of Recovery Act funds (Planning);
- funds were awarded and distributed in a prompt, fair, and reasonable manner (Funding);
- contracts contained required Recovery Act FAR clauses (Initial Execution); and
- projects avoided unnecessary delays and cost overruns (Project Execution).

Before selecting DoD Recovery Act projects for audit, the Quantitative Methods and Analysis Division (QMAD) of the DoD Office of Inspector General analyzed all DoD agency-funded projects, locations, and contracting oversight organizations to assess the risk of waste, fraud, and abuse associated with each. QMAD selected most audit projects and locations using a modified Delphi technique, which allowed us to quantify the risk based on expert auditor judgment, and other quantitatively developed risk indicators. QMAD used information collected from all projects to update and improve the risk assessment model. QMAD selected 83 projects with the highest risk rankings; auditors chose some additional projects at the selected locations. The \$18.3 million USAFA solar array FSRM project was included in the 83 projects selected.

We did not use classical statistical sampling techniques that would permit generalizing results to the total population because there were too many potential variables with unknown parameters at the beginning of this analysis. The predictive analytic techniques employed provided a basis for logical coverage not only of Recovery Act dollars being expended but also of types of projects and types of locations across the Military

Departments, Defense agencies, State National Guard units, and public works projects managed by U.S. Army Corps of Engineers.

## **Use of Computer-Processed Data**

We used computer-processed data from the FBO Web site, data reported in FPDS, and contract documentation from the Electronic Document Access System posted from May 2009 through December 2010 to perform this audit. Specifically, we used the FBO Web site to determine whether the Air Force had met the requirements for transparently reporting Recovery Act-funded contract actions. We tested the accuracy of these data by obtaining copies of contract documentation. We also interviewed program officials responsible for reporting on Recovery Act actions. No problems with data integrity came to our attention during the audit. From these procedures, we concluded that the DoD data were sufficiently reliable for our audit purposes.

## **Prior Audit Coverage**

The Government Accountability Office, the Department of Defense Inspector General, and the Military Departments have issued reports and memoranda discussing DoD projects funded by the Recovery Act. You can access unrestricted reports at <http://www.recovery.gov/accountability>.

## Appendix B. Recovery Act Criteria and Guidance

The following list includes the primary Recovery Act criteria documents (notes appear at the end of the list):

- U.S. House of Representatives Conference Committee Report 111-16, “Making Supplemental Appropriations for Job Preservation and Creation, Infrastructure Investment, Energy Efficiency and Science, Assistance to the Unemployed, and State and Local Fiscal Stabilization, for the Fiscal Year Ending September 30, 2009, and for Other Purposes,” February 12, 2009
- Public Law 111-5, “American Recovery and Reinvestment Act of 2009,” February 17, 2009
- OMB Memorandum M-09-10, “Initial Implementing Guidance for the American Recovery and Reinvestment Act of 2009,” February 18, 2009
- OMB Bulletin No. 09-02, “Budget Execution of the American Recovery and Reinvestment Act of 2009 Appropriations,” February 25, 2009
- White House Memorandum, “Government Contracting,” March 4, 2009
- White House Memorandum, “Ensuring Responsible Spending of Recovery Act Funds,” March 20, 2009
- OMB Memorandum M-09-15, “Updated Implementing Guidance for the American Recovery and Reinvestment Act of 2009,” April 3, 2009<sup>1</sup>
- OMB Memorandum M-09-16, “Interim Guidance Regarding Communications With Registered Lobbyists About Recovery Act Funds,” April 7, 2009
- OMB Memorandum M-09-19, “Guidance on Data Submission under the Federal Funding Accountability and Transparency Act (FFATA),” June 1, 2009
- OMB Memorandum M-09-21, “Implementing Guidance for the Reports on Use of Funds Pursuant to the American Recovery and Reinvestment Act of 2009,” June 22, 2009<sup>2</sup>
- OMB Memorandum M-09-24, “Updated Guidance Regarding Communications with Registered Lobbyists About Recovery Act Funds,” July 24, 2009
- OMB Memorandum M-09-30, “Improving Recovery Act Recipient Reporting,” September 11, 2009

- OMB Office of Federal Procurement Policy, “Interim Guidance on Reviewing Contractor Reports on the Use of Recovery Act Funds in Accordance with FAR Clause 52.204-11,” September 30, 2009<sup>2</sup>
- OMB Memorandum M-10-08, “Updated Guidance on the American Recovery and Reinvestment Act – Data Quality, Non-Reporting Recipients, Reporting of Job Estimates,” December 18, 2009<sup>2</sup>
- OMB Memorandum M-10-14, “Updated Guidance on the American Recovery and Reinvestment Act,” March 22, 2010<sup>2</sup>
- White House Memorandum, “Combating Noncompliance with Recovery Act Reporting Requirements,” April 6, 2010<sup>2</sup>
- OMB Memorandum M-10-17, “Holding Recipients Accountable for Reporting Compliance under the American Recovery and Reinvestment Act,” May 4, 2010<sup>2</sup>
- OMB Memorandum M-10-34, “Updated Guidance on the American Recovery and Reinvestment Act,” September 24, 2010<sup>2</sup>

## Notes

<sup>1</sup> Document provides Government-wide guidance for carrying out programs and activities enacted in the American Recovery and Reinvestment Act of 2009. The guidance states that the President’s commitment is to ensure that public funds are expended responsibly and in a transparent manner to further job creation, economic recovery, and other purposes of the Recovery Act.

<sup>2</sup> Document provides Government-wide guidance for carrying out the reporting requirements included in section 1512 of the Recovery Act. The reports will be submitted by recipients beginning in October 2009 and will contain detailed information on the projects and activities funded by the Recovery Act.



# Inspector General Department of Defense

